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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,040	08/06/1999	ALEXANDRA BROWNFIELD	MERCK2009	3802

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EXAMINER

KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 06/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/367,040	<b>Applicant(s)</b> BROWNFIELD ET AL.	
	<b>Examiner</b> Kevin R Kruer	<b>Art Unit</b> 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 March 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16 and 21-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16 and 21-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*AS*

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 16, 21-24, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over 46-026406 (herein referred to as Shiohara) in view of Okuda et al (US 5,575,957).

Shiohara teaches a pearlescent paper comprising a hydrolytic organic titanium compound or titanium compound halide that is adhered to flat microcrystals having an average diameter of 20-100um and a thickness of 500-1,000um. The prepared microcrystal is added to papermaking raw material during papermaking process (claim 1) in amounts of 4wt% based upon the weight of the pulp (See examples). Said process is understood to "homogeneously" distribute the pulp and the microcrystals. The micro crystal may comprise mica (page 4, lines 3+ of translation). The paper may further comprise color pigments (last line of page 5). Herein the microcrystals taught in Shiohara are understood to read on the claimed mica platelet-form substrates and the claimed peal luster pigment.

Shiohara does not teach that the paper should further comprise an electrically conductive pigment. However, Okuda teaches that electro-conductive particles have

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been incorporated into papers (col 1, lines 44+) in order to give the paper antistatic properties (col 1, lines 16+). The desired conductivity can be obtained by utilizing small amounts of electro-conductive particles (col 1, lines 55+). Okuda teaches a preferred electro-conductive particle comprising a tin oxide fine particle having a mean diameter of 0.005-1 $\mu$ m and a mean length of 0.05-10 $\mu$ m and an aspect ratio of 3 or higher (col 2, lines 42+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the acicular electro-conductive tin oxide particles taught in Okuda to the paper taught in Shiohara. The motivation for doing so would have been to give the paper the desired conductive properties. Furthermore, Okuda teaches that the level of conductivity is proportional to the amount of electro-conductive particles added to the paper (col 1, lines 55+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the amount of electro-conductive particles added to the paper taught in Shiohara. The motivation for doing so would have been to obtain the desired degree of conductivity.

With regard to claim 22, the tin oxide is herein understood to read on the claimed "electrically conductive pigment" of claim 16 and the "light sensitive pigment" of claim 22. As noted on page 8 of the specification, tin oxides read on the claimed light sensitive pigment.

3. Claims 16, 21-24, and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over 46-026406 (herein referred to as Shiohara) in view of Okuda et al (US 5,575,957) and Berger et al (US 4,740,269).

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Shiohara teaches a pearlescent paper comprising a hydrolytic organic titanium compound or titanium compound halide that is adhered to flat microcrystals having an average diameter of 20-100um and a thickness of 500-1,000um. The prepared microcrystal is added to papermaking raw material during papermaking process (claim 1) in amounts of 4wt% based upon the weight of the pulp (See examples). The micro crystal may comprise mica (page 4, lines 3+ of translation). The paper may further comprise color pigments (last line of page 5).

Shiohara does not teach that the paper should further comprise an electrically conductive pigment. However, Okuda teaches that electro-conductive particles have been incorporated into papers (col 1, lines 44+) in order to give the paper antistatic properties (col 1, lines 16+). The desired conductivity can be obtained by utilizing small amounts of electro-conductive particles (col 1, lines 55+). Okuda teaches a preferred electro-conductive particle comprising a tin oxide fine particle having a mean diameter of 0.005-1um and a mean length of 0.05-10um and an aspect ratio of 3 or higher (col 2, lines 42+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the acicular electro-conductive tin oxide particles taught in Okuda to the paper taught in Shiohara. The motivation for doing so would have been to give the paper the desired conductive properties. Furthermore, Okuda teaches that the level of conductivity is proportional to the amount of electro-conductive particles added to the paper (col 1, lines 55+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the amount of

electro-conductive particles added to the paper taught in Shiohara. The motivation for doing so would have been to obtain the desired degree of conductivity.

Shiohara also does not teach that the paper may be marked by exposing it to laser radiation. However, Berger teaches a process of making authenticating marks on paper by contacting with laser radiation from a laser light source (abstract). The laser makes a relief like authenticating mark by effecting structural changes in the fiber of the paper (col 1, lines 56+). Thus, it would have been obvious to one of ordinary skill in the art to expose the paper of Shiohara to a laser in order to make an authenticating relief-like mark on the paper.

With regard to claim 22, the tin oxide is herein understood to read on the claimed "electrically conductive pigment" of claim 16 and the "light sensitive pigment" of claim 22. As noted on page 8 of the specification, tin oxides read on the claimed light sensitive pigment.

4. Claims 25 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinmoto et al (US 5,897,938) in view of Schmidt et al (US 6,019,831). Shinmoto teaches a laser marking composition containing an inorganic powder and a binder (abstract). The composition may be applied to packing paper, labels, and cans made of paper (col 5, lines 34+).

Shinmoto does not teach that the inorganic powder should be platelet form. However, Schmidt teaches a non-lustrous iron oxide containing color pigment having a particle size of less than 60um and comprising a platelet-like substrate (abstract). The pigment exhibits high color intensity and high hiding power (col 2, lines 1+) and may be

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used as a laser markable pigment in plastic composition (col 11, lines 63+). Thus, it would have been obvious to one of ordinary skill in the art to utilize the pigment taught in Schmidt as the inorganic powder taught in Shinmoto because said pigment exhibits high hiding power and high color intensity.

### ***Response to Arguments***

Applicant's arguments filed March 22, 2005 have been fully considered but they are not persuasive. The application has been taken non-final to address the limitation of claim 22 that were inadvertently not addressed in the Office Action mailed 9/22/004.

Applicant argues the Office Action has failed to establish the requisite motivation to combine the references because the JP reference fails to teach or suggest inclusion of an electrically conductive pigment, much less tin oxide particles, as disclosed by Okuda. The examiner agrees the JP reference does not teach the inclusion of an electrically conductive pigment, but notes the rejection never relied upon the JP reference for such a teaching. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

With regard to the rejection of claims based upon the teachings of Shinmoto in view of Schmidt, Applicant argues the pigments disclosed in Schmidt have a high color intensity and high hiding power. Said teaching, according to applicant, clearly indicates

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that Schmidt does not teach or suggest an absorber material having a pale intrinsic color. The examiner respectfully disagrees. Regardless of how the pigments are described, both the claimed pigments and the pigments of Schmidt comprise iron oxide and will, therefore, inherently comprise the same properties.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'K R K', is positioned above the printed name of the examiner.

Kevin R. Kruer  
Patent Examiner-Art Unit 1773